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COMMERCIAL BANKING AND CAPITAL FORMATION

II

I. INTRODUCTION

It may be recalled that in the excerpts from standard treatises given in the first paper of this series¹ commercial banking was discussed from four points of view. Having considered the first three of these in the preceding article, we may now turn our attention to the fourth view, namely, that commercial banking is—or should be—related to commerce rather than to industry, to the manufacturing and marketing of goods rather than to the development of fixed capital in the form of plant and equipment.

This view of commercial banking has found incorporation in our banking legislation. It was the theory underlying our national banking law from the beginning, and it has been given added emphasis in connection with the Federal Reserve System. A large portion of the discussion preceding the recent reorganization of our banking system emphasized the importance of keeping bank assets liquid by (largely) confining the use of bank funds to short-time loans to business men engaged in the producing and marketing of goods, loans which would be “automatically self-liquidating” in two or three months through the sale of goods bought with the very funds that had been borrowed. Loans, the proceeds of which were used for the creation of fixed capital, plant, and equipment, were to be viewed with suspicion and restrained to the smallest possible minimum. Similarly, under the Federal Reserve act itself the regulations that have been laid down with reference to rediscounts, etc., draw a sharp line between investment and commercial uses of funds, and the attempt is being made, through these regulations and through the development of the trade acceptance, to confine the activities of our commercial banks mainly to the financing of commodities through the various stages of raw material, partly finished goods, and finished products in their passage through

¹ *Journal of Political Economy*, XXVI (May, 1918), p. 484-509.

the hands of producers, manufacturers, wholesalers, and retailers, respectively.

It will be noted that qualifying terms have been used above, such as "should be," "largely," and "mainly." These qualifications are necessary because it has long been recognized that our commercial banks are prone to ignore, in practice, the distinction between commercial and investment business. Writers on banking have doubtless been inclined, because of their desire to emphasize the importance of commercial loans in connection with the liquidity of assets, to underestimate somewhat the extent to which commercial bank funds are, in practice, loaned for non-commercial uses. But it should not be inferred that men such as Scott and Laughlin¹ fail to realize that a very considerable amount of loaning for investment uses has, in fact, developed.² Despite the provision of the national bank act forbidding loans on real estate and despite the emphasis in the Federal Reserve act upon "genuine commercial operations," it has been quite generally recognized that a considerable quantity of non-commercial (non-liquid) loans may safely be made, provided the bulk of the bank's assets grow out of live commercial operations. It is usually argued, however, that a disproportionate quantity of investment loans renders bank assets unliquid, endangering the ability of the banks to meet their demand obligations and consequently imperiling the entire credit structure. It is believed, therefore, that investment loans should be restrained and kept within very conservative bounds.

The purpose of this and a succeeding paper is (1) to indicate the extent to which the distinction between commercial and investment operations is ignored in actual banking practice, and (2) to

¹ See quotations in previous paper, *Journal of Political Economy*, XXVI (May, 1918), p. 492.

² Anderson writes, after referring to Scott, that "to one accustomed to this view . . . (the following table, showing the extent of investments by all banks) will occasion dismay." *The Value of Money*, p. 498. Scott was among the first however to point out specifically the various ways in which commercial banks do, in practice, extend loans for investment uses. He merely believes that the practice is dangerous, a fruitful cause of inflation. (See his "Investment vs. Commercial Banking" in *Proceedings of the Second Annual Convention of the Investment Bankers Association of America* [1913], pp. 81-84.) Numerous other writers have taken the same general stand, e.g., Cleveland, Barron, Geiger, Brandeis, Laughlin, and Ingles.

raise the question whether this banking practice has, in the main, any serious consequences. Does the traditional distinction between commercial and investment loans serve any practical purpose? Has the point of view presented in the previous paragraph with reference to the liquidity of bank assets any solid foundation?

II. THE MEANING OF "COMMERCIAL" LOANS

In order to estimate what proportion of the funds of commercial banks is devoted, in practice, to investment operations it will be necessary to make a preliminary analysis of banking terminology. There has been much confusion in the use of the term "commercial" as it relates to banking operations. Commercial loans are often regarded as synonymous with short-time loans; sometimes the term relates merely to credit extension devoted to the marketing of goods; and again "commercial paper" is technically limited to that which is sold through the intermediation of brokers or commercial paper houses. These varying uses of the term have led to much confusion as to the actual nature and scope of commercial banking operations.

In his recent volume on *The Value of Money* B. M. Anderson defines commercial paper as "all loans of a really liquid character, made by banks to merchants and others to pay for the purchase of goods in anticipation of a resale within the term of the loan which will enable the loan to be repaid at maturity. From this should be excluded, however, loans made to speculators."¹ As Anderson points out, this is not in accordance with the market or street use of the term, which regards that paper as "commercial" which is bought through commercial paper houses. It is rather the broad economic conception of *commercial* as distinguished from *industrial* business. It is on the basis of this conception of commercial paper that Anderson concludes that the commercial paper of all national and state banks and trust companies in the United States constitutes only 18.2 per cent of the total credit extensions of these banks.² A criticism of Anderson's analysis will serve as a convenient point of

¹ Anderson, *The Value of Money*, p. 499.

² Anderson, *op. cit.*, p. 509. Anderson believes this to be too conservative a figure (footnote, *ibid.*).

departure for a discussion of the investment operations of the commercial banking system.

In his analysis of commercial paper Anderson rules out manufacturer's paper from the commercial class, and in doing so is of course not without company. Our habit in the economic fraternity of drawing the line between industry and commerce—between “industrial organization” and “commercial organization”—at the manufacturer is, however, untenable from the standpoint of banking analysis. A manufacturer regards his raw materials as quick or liquid assets; they are considered in the trade to be quite as liquid as accounts or notes receivable from wholesalers or retailers. If two months are required to “finish” given raw materials and sell them to wholesalers, why should not a loan to pay for the purchase of these raw materials for manufacture be regarded as a commercial loan? To separate manufacturer's paper from wholesaler's paper is in effect to argue that there is for the purpose of banking analysis a vital difference between the creation of a form utility and the creation of a time, place, or possession utility.

The reason why manufacturer's paper should be classed as commercial may best be appreciated perhaps by a brief consideration of the basis on which a bank usually makes a loan to a manufacturer. If the financial statement of a manufacturer shows a satisfactory ratio of quick assets to current liabilities, and if other factors are in no wise disquieting, the loan will be made. The quick assets are cash, raw materials, partly finished and finished goods, and accounts and bills receivable for goods sold. The banker expects to be paid from the excess of inflow over outgo of funds during the period of the loan. Practically all of the inflow of funds comes, in fact, from goods already sold to wholesalers and retailers but not yet paid for, and from other goods being sold from day to day, or which could shortly be sold in case of compulsory liquidation. The means of payment to the banker therefor come from the sale of goods quite as much as in the case of loans to middlemen. Moreover, they come from these very middlemen themselves.¹ This same

¹The funds for repayment do not, it is true, come from the resale of specific goods purchased with the proceeds of the loan, but this fact in no sense renders the loan a non-commercial one. It may be added that in most cases under prevailing banking methods retailers are not repaid from the sale of specific goods bought in anticipation of such sale. See *infra*, p. 645.

analysis will obviously apply still farther back in the industrial process—with the producer of the raw materials. The “working capital” as distinguished from the fixed capital in the form of plant and equipment may, it seems to me, fairly be regarded as engaged in commercial business so far as the banking viewpoint is concerned. Ten thousand dollars borrowed from a bank by a producer of raw materials may in three months’ time convert itself into more than ten thousand dollars worth of raw materials that have been sold to a manufacturer. Nor does it matter, as one would infer from Anderson,¹ if some or even most of the proceeds of the loan are paid out as wages. If the laborers to whom the wages are paid bring forth the raw materials and start them on the way through the various stages of the industrial process, the funds borrowed are just as clearly being put to uses which provide the means for the automatic payment of the loan at maturity as when the funds are devoted to the purchase of goods by a retailer; and, as in the case of the manufacturer, the loan is, in fact, made with the knowledge that it will be paid from receipts from sales.

Anderson also rules out virtually all loans to agriculture as being non-commercial, whether the funds are used for growing and harvesting the crops, for fattening live stock, or for making permanent improvements, purchasing breed cattle, etc. To my way of thinking so long as the funds borrowed are put to uses which shortly result in products for sale which have a value equal to or in excess of the amount of the loan, we should regard such operations as commercial. It should be remembered that, as in the previous cases, the bank looks to the proceeds from sold goods for its payment. To use a common expression of the country banker, it is thus that the bank “sees the money coming back.”

It would seem that Anderson also unwarrantably narrows the scope of commercial operations when he insists that loans secured by warehouse receipts are not commercial loans when they represent “advances to live stock, grain and produce traders, and speculators on the Board of Trade, at the stockyards, etc.”² He admits that such loans are liquid, but argues that they are not commercial.

¹ *Op. cit.*, p. 500.

² *Ibid.*, p. 503.

This position is much harder to understand than that of ruling out manufacturer's paper, for economic science has generally regarded such operations as those listed above as the activities of middlemen engaged in the marketing or distribution process. So far as I can make out Anderson would, however, confine "commerce" exclusively to the activities of wholesalers and retailers, importers and exporters.¹

To guard against misinterpretation at this place the reader should bear in mind that I have not been arguing that *all* short-time loans made to producers, manufacturers, etc., are necessarily self-liquidating or that many of the funds thus borrowed are not put to investment uses. This whole question is reserved for later discussion. The present purpose is merely to show that from the standpoint of banking analysis the line between commerce and industry should be drawn, if drawn at all, between fixed or durable forms of capital goods, on the one hand, and circulating capital and consumption goods, on the other hand. The investment process, it is said, is from the very nature of the use to which the funds are put slowly liquidating, while purchases and sales of raw materials, partly finished, and finished goods, are, in the nature of things, quickly liquidating operations. Plant and equipment represent investment business, whether in retailing or manufacturing, and materials and stocks of goods represent commercial business, wherever found.²

III. THE VARIOUS TYPES OF BANK LOANS

It will best serve the purposes of our present study if we drop for the moment the terms that we have been employing and shift

¹ One definition of "commerce" may of course be as good as another; but the test is applicability to the problem in hand. Anderson's restricted use of the term leads him to conclusions which are quite untenable. For instance, his fear that the banks of the financial centers possess so little genuine commercial paper available for rediscount that unless they be given power to rediscount investment paper they will be unable to expand credit sufficiently to meet the requirements in a period of crisis should be greatly weakened owing to the fact that the Federal Reserve Board does not limit "commercial paper" to loans devoted to wholesaling and retailing, importing and exporting but draws the line between fixed capital and circulating capital in the way that has been suggested above.

² Whether commercial business is all equally liquid is of course another question.

both our point of view and our terminology to that of the business world. The typical business man does not ordinarily distinguish between the commercial and investment aspects of his business; he is more likely to speak of his *fixed capital*—plant and equipment—and of his *working or operating capital*—materials, stocks of goods, etc. Under modern corporate conditions he borrows through or from various financial institutions no small proportion of both his fixed and working capital. Since this capital is borrowed in the form of money or liquid funds, the business man very naturally regards his capital, in the first instance, as money or its equivalent. To the business man, therefore, financial houses are institutions to which he may go when he wishes to borrow the necessary funds with which to build or operate a business.

As our financial fabric has developed, business men have of course looked to our so-called commercial banks as the main source of loans for working capital. Fixed capital is in considerable measure borrowed directly through investment institutions; but nowadays business men go either directly or indirectly to the commercial banks for an enormous amount of fixed capital.¹ In order to understand clearly the ways in which our commercial banks furnish the funds for fixed capital and the bearing of this upon the liquidity of bank assets in the modern business world it will be necessary to analyze briefly the various forms of loans now made by commercial banks. The purpose in hand is that of showing to what uses the funds borrowed are devoted in practice.

Commercial banks advance funds to the business world in four main ways: (a) by "unsecured" or non-collateral loans; (b) by collateral loans; (c) by the purchase of bank acceptances; and (d) by investments in bonds and stocks.

a) *Unsecured or non-collateral loans*.—The development of American business and banking methods since the Civil War has been such that non-collateral ("commercial") loans do not always represent genuine commercial operations. For reasons which need not be discussed here it became a common practice in the latter part

¹ It should be recalled here that the funds of investment institutions do not necessarily arise out of cash operations anywhere. A savings deposit by A may be a check on a commercial bank which grew, originally, out of a loan from a commercial bank.

of the nineteenth century for producers and dealers to sell goods on open account, with an option to the buyer of paying cash shortly and receiving a discount. Time drafts were not drawn and presented for acceptance, and notes came to be required, in the main, only when the borrower's credit was doubtful or, in the case of extensions, when the open accounts ran to maturity and then were not paid. This change in commercial practice caused a corresponding change in the machinery of banking. Instead of discounting customers' notes or acceptances with a banker the business man who wanted to borrow presented his own unindorsed note to the banker. Producers of raw materials, manufacturers, jobbers, wholesalers, and retailers—all were to a greater or less extent buying and selling on credit. No class owned all its working capital; each had to borrow. Some classes of business men borrowed more extensively from banks than others, but this does not concern us here. Our present consideration is that in making a loan the bank ceased, under the changed credit methods, to rely for its security upon a specific and actually completed business transaction.

Under the old method, if wholesaler A had in his portfolio twenty thousand dollars in accepted drafts or notes of retailers he could discount each with the bank and get twenty thousand dollars less the discount. Under the new method the bank does not directly discount the accounts receivable of wholesaler A or undertake their collection at maturity for a commission or discount.¹ This would be impracticable, because, among other reasons, the precise date of payment of the open account is uncertain; advantage may be taken of the cash discount or the buyer may choose to wait until maturity. In any event the commercial bank has come in recent years to grant each customer a "line of credit" of such a total as the general condition of his business warrants.

The amount that may safely be loaned under these conditions can be ascertained only from an intimate personal acquaintanceship with the borrower and his business or from a study of a balance sheet or financial statement setting forth the condition of the business. The growing impersonality of modern business in the larger

¹ There are some financial houses in the larger cities, however, that have developed a special business of this sort.

centers and the growing size and complexity of business enterprise has more and more necessitated the use of the balance sheet as a basis of credit extension. Historically it appears that it was in the late seventies that financial statements were first used in procuring loans, though it was not until the nineties that their use became common even with the larger commercial banks.¹

Under this new method of loaning the bank does not look to specific commercial transactions for its security, but to the quick assets in general. Below is a financial statement which was presented to a large commercial bank as a basis for a loan. Its correctness had been attested by a certified public accountant.

RESOURCES

Manufactured merchandise.....	\$ 322,322.77
Raw material.....	86,926.42
Accounts and notes receivable.....	287,267.64
Cash.....	111,694.51
	<hr/>
	\$ 808,211.34
Real estate.....	207,860.59
Equipment.....	104,870.73
Furniture, fixtures, and supplies.....	48,126.78
	<hr/>
Total.....	\$1,169,069.44

LIABILITIES

Notes and accounts payable.....	\$ 143,202.20
Capital stock.....	400,000.00
Profit first six months.....	\$50,666.56
Profit second six months.....	75,568.62
Surplus.....	583,645.18
Reserve fund.....	27,222.06
Special reserve.....	15,000.00
	<hr/>
Total.....	\$1,169,069.44

A large loan was in fact granted on the evidence presented by this balance sheet. This is not the occasion for a detailed analysis of a financial statement, but, in brief, the evidence of ability to repay the loan is to be found in the ratio of quick assets to current

¹ With the small suburban banks of our cities and with country banks generally the statement is of course even now not generally used.

liabilities. The quick assets are the first four items; they total \$808,211.34. The current liabilities are the notes and accounts payable, \$143,202.20. Suppose this company applies for a loan of \$200,000. The banker sees that the company has to meet \$143,202.20 of obligations in the near future. Will it be able to repay in three months an additional obligation (a loan from the bank) of \$200,000? The company has cash amounting to \$111,694.51 and accounts and notes receivable amounting to \$287,267.64, a total of \$398,962.15, with which to meet a total indebtedness of \$343,202.20. But in addition the company has manufactured merchandise and raw material valued at \$409,249.19, much of which may be converted into cash within three months and most of which could be quickly disposed of without tremendous sacrifice in the event of liquidation, \$808,211.34 (total quick assets) — \$343,202.20 (total current liabilities) = \$465,009.14, the margin of security possessed by the bank. There could be a substantial loss in the accounts and notes receivable and a heavy shrinkage in the value of the manufactured merchandise and the raw material before the security of the loan would be seriously impaired. In fact in the case before us the security is more than ample—a considerably larger loan than \$200,000 might well be made.

But we have neglected one important item in our analysis. What use was made of the \$200,000 borrowed from the bank? If spent in the purchase of raw materials the quick assets are increased by \$200,000 and the margin of security is proportionally enlarged. Note in this case that the bank's margin of security would certainly be substantially larger than it would have been had it merely discounted for this manufacturer a large note receivable or an accepted trade draft growing out of an actually specific completed transaction, unless this latter were buttressed by a large amount of unattached assets. In fact I think it an open question whether the use of the discounted trade draft will in practice result in a sounder credit extension than the present method when efficiently operated. This is, however, another story.¹

¹ It may be noted here that the better banks do not discount trade acceptances without reference to the proportion of quick assets to current liabilities for the business as a whole. In other words, they refuse to rely upon the "specific" transaction.

To return to the use of this \$200,000 that is borrowed from the bank: suppose that instead of buying raw materials the manufacturer uses it for investment purposes—for new plant or equipment. Does this make the loan any less liquid than when the funds are devoted to commerce? The answer should be apparent that it does not. It might be argued, however, that it would be safer as well as more liquid if the funds were used for raw materials rather than for fixed capital. The answer is that, although such a use of the funds would result in the creation of additional quick assets, a larger loan could, and usually would, in consequence be made, so that the ultimate margin of liquid resources would remain the same as before.¹ In practice banks do not object to the use of funds borrowed on short-time paper without collateral for investment purposes so long as the ratio of quick assets to current liabilities is sufficiently ample to insure the payment of the loan from the excess of income over outgo;² and there is no reason why they should.³

Owing to the agitation in favor of genuine commercial operations in connection with the Federal Reserve System, bankers are now somewhat loath to admit that they sanction the employment of loans made by the foregoing method for investment uses, but the fact that a considerable percentage of such loans does go for the development of fixed capital is widely known. It is of course impossible to say precisely what percentage of non-collateral loans is in fact used for the creation of fixed capital; but the writer's estimate based on investigations extending over a period of several years would be at least 20 per cent.

¹ Modern businesses, as a rule, borrow pretty much to the limit imposed by their net resources.

² The extent to which quick assets must exceed current liabilities for the loan to be safe varies widely in different lines of business. For a time many bankers followed a rule-of-thumb "two to one" ratio, without much variation; but of recent years the analysis has come to be more and more that of "each case on its merits."

³ Again we must of course question the efficiency of the analysis that banks make under this method. The writer's studies in bank management have led him to believe that with the big commercial banks of the cities the analysis is now very efficient. While the statement is not commonly used in the small town banks there is nevertheless a fairly accurate knowledge of the probable excess of income over outgo during the period of the loan.

In concluding this discussion of loans without collateral it only remains to recall to the reader that in the process of making such loans the commercial banking system, through the process discussed in the preceding paper, has done something more than transfer funds from lenders to borrowers; it has multiplied its cash resources by sixteen—created liquid funds to \$16,000 for every \$1,000 of actual specie in bank vaults. It is usually stated that this is an expansion of the circulating medium. It will serve our present purpose better, however, to call it an expansion of “capital,” using the term in the popular business sense. This “capital,” moreover, let it be repeated, is only partly “working” or “operating” capital; to the extent that the funds borrowed are employed in the creation of plant and equipment it is “fixed” capital that has thus been augmented.

b) Collateral loans.—In undertaking a study of collateral loans it will prove serviceable to consider, first, under what circumstances collateral security is required or given. Broadly speaking, we may say that the theory underlying the hypothecation of collateral with a bank is, sometimes, that there is doubt as to the ability of the borrower to pay the loan promptly at maturity and, again, that the business of the borrower is of such a nature that no serious inconvenience attaches to the deposit with the bank of acceptable collateral security. Conversely, if we may regress for a moment, the theory underlying the non-collateral loan is in part that there is so little chance of the nonpayment of the loan at maturity that to require collateral is to insist upon superfluous protection, and in part that, owing to the nature of his business, the borrower possesses no collateral which he could conveniently offer as security. The first of these reasons of course relates to the commercial use of the funds borrowed, or to an accurate appraisal of the excess of income over outgo during the period of the loan. But even if the risk of nonpayment were not negligible, it would nevertheless be impossible, in many instances, for the borrower to put up collateral, for a merchant cannot deposit his wares with the bank and at the same time display them for the purpose of sale. He would need either to give the banker a chattel mortgage on his goods or else deposit securities of some sort which he chanced to own. The

chattel mortgage would require no little expense and, moreover, there are legal obstacles to its convenient use. As for securities the business man seldom owns stocks and bonds in sufficient quantity to serve as collateral for all the working capital which he must borrow, if, indeed, what he may own is not already in use as collateral for borrowed fixed capital.

Returning now to the theory of the collateral loan, it should be borne in mind that the risk of nonpayment at maturity, where it exists, does not necessarily reflect upon the character of the borrower; it is an indication, rather, that the use to which the funds borrowed are devoted is such that they do not give ordinary assurance that the loan will be paid *at maturity*. Such loans are made for consumptive, investment, or speculative uses rather than for ordinary commercial purposes.

It should be noted, however, that this is not always the case. Whenever goods are stored in warehouses we are likely to find that the owner hypothecates the warehouse receipt with the banker when he borrows working capital. This indicates neither that the character of the borrower is bad nor that his business is not of a commercial nature. Wheat, whiskey, canned goods, and cotton are examples of warehoused goods' receipts against which are often used as collateral. Such transactions may or may not be of a speculative nature. In many instances, certainly, the reason for requiring collateral is that collateral is available because the way in which the goods are handled is such as to give rise to a legal instrument adapted for use as collateral.¹

Similarly the use of bills of lading as collateral does not necessarily bespeak any great risk of nonpayment; and it certainly does not denote a non-commercial employment of funds. The bill of lading is necessary, first, as an evidence that the railroad has received goods for shipment, and its use as collateral is primarily due to the fact that the shipper has here a piece of documentary evidence of an actual commercial transaction—evidence, moreover, in such a form as to be conveniently turned over to the bank as collateral security for the goods in transit. He is thus enabled to borrow on a narrower margin of security. It should be noted,

¹ The great development of warehousing in recent years is making this form of loan increasingly common.

moreover, that loans on warehouse receipts and bills of lading furnish working capital.

But we are here concerned with loans that are made for non-commercial purposes and with collateral in the form of stocks and bonds. Stocks and bonds are hypothecated with banks in order to secure funds for three main purposes: consumption, investment, and speculation.¹ Discussion of the consumptive loans may be passed by, for they are relatively unimportant. By investment collateral loans we mean loans to business men who use the funds in the creation of fixed capital. Collateral is in such cases required primarily in order to protect the bank in case the loan is not paid at maturity, to enable it to get cash through the sale of the collateral.

The speculative collateral loans require more careful consideration. First, what does the term "speculative" mean? Is speculative borrowing to be differentiated from commercial and investment borrowing, or are the funds thus borrowed merely devoted to commercial or investment business, as the case may be, that is of an especially risky nature. From the business viewpoint do speculative loans provide working or fixed capital? It will be necessary to discuss in turn the several types of borrowers that are associated with the securities markets.

1. Financial houses which underwrite the sale of securities borrow extensively from banks. From the standpoint of the underwriters these borrowed funds are working capital. They constitute the means whereby they finance their underwriting operations and are of course not used by the underwriters in the creation of plant and equipment. From this point of view it is apparent that the business of the underwriter is closely akin to certain phases of commercial business, such as that of the traders in grain, cotton, and live stock. But since bonds and stock are less staple and more speculative than crops and cattle there is a greater risk that stock-exchange loans cannot be promptly paid at maturity.

From the point of view of the uses to which the funds borrowed by the underwriters are eventually devoted, however, we find that they are aiding investment operations. In advancing funds to

¹ Commercial borrowers, whose unsecured credit is not of the best, of course often borrow on collateral; but such loans need not be discussed here.

corporations, pending the ultimate absorption of securities, underwriters enable the corporations to begin operations more quickly than would otherwise be possible. It follows that to the extent that the underwriters borrow from commercial banks the banks are, in final analysis, advancing through this process funds for fixed capital uses.

2. Bond houses and stockbrokers engaged in the marketing of investment securities hypothecate unsold holdings with commercial banks as security for working capital. Here we have a very close analogy to ordinary commercial business. Instead of stocks of goods the bond house and stockbroker have bonds and shares for sale. But since such wares are much more likely to fluctuate widely in value than are articles of staple consumption there is a greater necessity for collateral security. It must be borne in mind, however, that these businesses are of such nature that it is easy to put up collateral. The bonds and shares, unlike merchandise, do not have to be on display. As we shall presently see, it is quite possible that banks would assume the risks of such loans without the deposit of collateral were there any necessity for so doing.

It should be observed here, again, that while the bond house and stockbroker borrow working capital on this collateral security the funds are in fact ultimately used in the development of fixed capital in the corporations whose securities they are marketing.

3. There is a vast business of buying on margins in which stocks and bonds are used as collateral. In connection with this business it is important to note that the brokers temporarily borrow from the banks without depositing collateral. This was once generally done through the process of overcertification but now is done by "morning" loans—at least so far as the national banks are concerned. The broker's customer puts up a margin of, say, 10 per cent with which to buy \$10,000 of stock. On this \$10,000 of stock as security the bank would loan, let us say, 80 per cent, or \$8,000. Thus the client furnishes \$1,000, the bank \$8,000, and the broker \$1,000 in the purchase of \$10,000 worth of stock. But it is evident that the stock cannot be hypothecated with the bank until the broker has it, and that he cannot gain possession of it until he has paid for it. The broker therefore borrows \$8,000 from the bank

on his personal security. Under the method of overcertification he draws a check against the bank for \$10,000 and the bank certifies it, although his balance there is only \$2,000, including the margin advanced by the customer. With this check the broker buys the stock, which he then deposits as security for the loan of \$8,000. With the "morning" loan the broker is extended a daily line of credit proportioned to his requirements and conditioned by the maintenance on his part of a satisfactory net daily balance with the bank. In either case it will be observed that, pending the delivery of the collateral, the bank has made unsecured loans. There is small risk in this practice, for the broker's reputation and business ability are examined with great care before the loan is granted. Such loans, moreover, are of extremely short duration. As soon as the stock is purchased it must be deposited as collateral, and the loan then becomes a secured one. But there is clearly an interval of time in which all such loans are without security other than the personal character and the unattached property of the borrower. It should be noted here also that when an unsecured loan is made to a merchant there is a large amount of liquid assets to fall back upon in case of trouble, while in the case of brokers' loans there is as a rule only a meager cash balance in the bank.

It will be observed from the foregoing analysis that the brokers borrow working capital (and they possess little that is not borrowed) from the commercial banks.

Turning to a consideration of the ultimate uses to which the funds thus borrowed are devoted we find, however, a somewhat different situation. It is to be observed, first, that these vast investments in corporate securities are largely financed by the commercial banks. Assuming a 20 per cent margin of collateral, 80 per cent of the funds devoted to margin speculation is borrowed from the banks. Here again the commercial banks are really furnishing funds for investment purposes, for from one angle we find that such funds represent the purchase money for securities sold for the purpose of raising fixed capital. The corporations which issue the securities are making investment uses of the funds thus borrowed—not of the specific funds, it is true, but of generalized funds, the ownership of which is merely being constantly shifted as the

securities are bought and sold in the market. Somebody, regardless of the shifting of ownership, is permanently out of funds which the corporation is using; and it is some commercial bank that is always furnishing the greater portion of such funds.

Viewed from one angle we call such operations "speculative" in their nature. This is of course an acceptable appellation so far as the purpose of the margin trader is concerned when he makes his purchase. But it is to be observed that this fact in no wise affects the other fact that through the process of loaning on collateral the commercial banks advance great quantities of funds which are used for fixed capital.

It should perhaps be noted in passing that the active market provided for such securities by this speculative trading is indispensable to a successful original sale of securities. One will buy securities with temporarily idle funds provided he is assured a ready sale at any time he may prefer to have his resources in the form of cash. Business men are coming more and more to make investments in bonds for short periods of time during slack business seasons; while banks have of course long carried securities as temporary investments during periods of easy money in their particular communities. Because of this active market we therefore not only induce original investments, but we enable business men in general to keep at all times a much larger proportion of their resources profitably employed than would otherwise be possible, and hence enable corporations to use continuously a larger total of borrowed funds than would be possible if investments were confined to those who could spare funds permanently. It is in no small degree owing to this flexibility in the financial structure as a whole that modern business can be conducted on so vast a scale. And it is the loaning on collateral by the commercial banks which makes this flexibility possible.

In concluding this discussion of collateral loans it is to be noted again that the commercial banks (considered as a system) are able, when making loans on collateral, to expand loans to sixteen times the amount of cash resources at their disposal, just as in the case of loans made on unsecured paper. Whether there are especial dangers connected with such an expansion of credit on the basis of col-

lateral security will be discussed in a following article, which is devoted specifically to the problem of liquidity.

c) *The purchase of bank acceptances.*—Banks also extend credit by the purchase of acceptances of other banks. The accepting bank is willing to accept only if satisfied that the customer on whose behalf the acceptance is made will be in a position to put the bank in funds before the maturity of the acceptance. The analysis required by the accepting bank in such a case is the same as that required when a loan is made. Purchased acceptances, therefore, usually represent an extension of funds for commercial uses, though it is possible that about the same percentage of such extensions goes for fixed capital uses, as in the case of loans to customers. Perhaps, however, the fact that the acceptance business has developed at a time when the Federal Reserve System so strongly emphasizes the need of confining commercial banking to “genuine commercial operations” has resulted in more strictly limiting the use of such funds for commercial purposes.

d) *Investments in bonds and stocks.*—There remain to be considered the investments which banks make directly in securities. This practice has extensively developed in recent times, and our commercial banks now have enormous holdings of securities. It is confined to no particular class of banks, though perhaps some of the commercial banks of the great financial centers have most extensively entered the field of direct investment operations. Such banks as the National City and Guaranty Trust Company of New York, for instance, now hold vast amounts of securities in a wide range of businesses. In 1916 the securities holdings of national banks, including United States bonds, equaled 30 per cent of all the loans and discounts of national banks; exclusive of United States bonds they equaled 20 per cent. For state banks in the same year the percentage of investments in securities and real estate (other than bank premises) to loans and discounts was 21.5 per cent; for trust companies, 46.5 per cent.¹

In the light of the foregoing analysis we may now present some tables which will roughly indicate the degree to which commercial

¹ These figures are based on the *Report of the Comptroller of Currency, 1916*, II: national banks, p. 364; state banks, p. 859; trust companies, p. 885.

TABLE I
INVESTMENT BUSINESS OF NATIONAL BANKS*

LOANS OF COMMERCIAL NATURE	
Unsecured by collateral (demand).....	\$ 660,213
Unsecured by collateral (time).....	3,760,225
Discounted acceptances.....	24,500
Total unsecured by collateral.....	<u>\$4,444,938</u>
Secured by merchandise, warehouse receipts, etc. (demand).....	\$ 223,639
Secured by merchandise, warehouse receipts, etc. (time).....	661,338
Total secured.....	<u>\$ 884,977</u>
Total secured and unsecured.....	\$5,329,915
Total genuine commercial loans (unsecured) equal \$4,444,938 minus 20 per cent† of \$4,444,938...	\$3,555,950
LOANS OF INVESTMENT NATURE	
I. <i>Loans:</i> ‡	
Secured by stocks and bonds (demand).....	\$1,159,007
Secured by stocks and bonds (time).....	1,029,612
Secured by real estate, mortgages, and other liens on realty.....	160,633
Total investment loans	<u>\$2,349,252</u>
II. <i>Investments:</i> §	
United States bonds.....	\$ 731,205
Other bonds, securities, etc.....	1,527,832
Stocks (not Federal Reserve banks).....	39,272
Total investments	<u>\$2,298,309</u>
Total loans of investment nature equal invest- ment loans plus 20 per cent¶ of \$4,444,938.	\$3,238,239
Percentage of all loans that are of investment nature equals.....	53.7
Percentage of loans plus investments that are of investment nature equals.....	64.4

* 000 omitted from each amount.

† This estimate that 20 per cent of the non-collateral loans are of an investment nature is derived from the analysis above, p. 648.

‡ Data on loans taken from *Report of Comptroller of Currency, 1916*, II, 161, date of June 30.

§ Data on investments taken from *Report of Comptroller of Currency, 1916*, II, 364, date of June 30.

¶ This addition to investment loans is of course a result of the situation mentioned in note 1.

banks in the United States extend their funds for investment uses.

It is impossible to present a detailed table for either state banks or trust companies because the comptroller's reports do not subdivide loans and discounts.

TABLE II
INVESTMENT BUSINESS OF STATE BANKS¹

Loans and discounts plus overdrafts:

Commercial² \$1,577,433,300

Investment..... 1,829,549,334

\$3,406,982,634

Investments..... \$693,287,159

Other real estate owned..... 52,304,090

Total..... \$ 745 591,249

Investment loans..... 1,829,549,334

Total investment business..... \$2,575,140,583

Percentage of loans plus investments that are of an investment nature. .62.1

It is to be noted that in Table II it has been assumed that the percentage of loans that are of an investment nature is the same as in the case of the national banks. It is generally known, however, that state banks, subjected to less stringent supervision, have been less inclined to confine loans to genuine commercial uses than the national banks. The foregoing figures, therefore, are too conservative. The investment business of the state banks would probably be between 65 and 70 per cent of the total credit extended.

I am quite aware that these tables are open to question at various points. It may be that my estimate that 20 per cent of the unsecured loans goes for investment commercial uses is somewhat too high. The application of this 20 per cent deduction to the discounted acceptances may also be questioned (but the amount of acceptances at this date is not great), and it is of course true that some of the loans made with collateral as security go for working

¹ The table is for 15,450 state banks. Data taken from the *Report of the Comptroller of Currency, 1916*, II, 859.

² This is assuming that the loans of state banks show the same percentage to be devoted to investment as do those of the national banks, namely, 53.7 per cent.

capital rather than for fixed capital; the tables make no allowance for this. Exact percentages in a problem of this kind are, however, of little consequence. It is enough that we may safely conclude that around 50 per cent of all loans of national and state banks and

TABLE III
INVESTMENT BUSINESS OF TRUST COMPANIES¹

Loans and discounts plus overdrafts:

Commercial²..... \$1,715,123,630

Investment..... 1,989,244,902

\$3,704,368,532

Investments..... \$1,605,392,872

Other real estate owned..... 82,329,934

Total..... \$1,687,722,806

Investment loans..... 1,989,244,902

Total investment business..... \$3,676,967,708

Percentage of loans plus investments that are of an investment nature... 68.2

trust companies is devoted to investment uses, and that, including direct investments, in the neighborhood of two-thirds of all the credit extended by commercial banks goes for fixed rather than for working capital.

IV. INVESTMENTS IN BONDS AND SECURITIES NOT A MERE
TRANSFER OF FUNDS

We must now return for a moment to a consideration of direct investments which commercial banks make in bonds and securities. The significance of the commercial bank in the field of investment can be understood only by a clear recognition that in making investments in securities, just as in the making of loans, the commercial banking system is something more than an intermediary in the transfer of funds from borrowers to lenders. The credit organization which characterizes commercial banking operates quite as much in the making of investments as in the making of loans, and the

¹ The table is for 1,606 loan and trust companies. Data taken from the *Report of the Comptroller of Currency, 1916*, II, 885.

² This is assuming that the loans of trust companies show the same percentage to be devoted to investment as do those of the national banks, namely, 53.7 per cent.

development of the commercial banking structure has thus involved a multiplication of cash resources by sixteen, just as in the previous examples given. That is to say, on the basis of a cash reserve of \$1,000 the commercial banking system has made possible the purchase of \$16,000 worth of securities. It must be emphasized that this multiplication of loanable funds has resulted from the organization of the commercial banks as a whole, and that it cannot be perceived by studying the operations of any individual bank in isolation.

In order to test the correctness of the assumption that the commercial banking system multiplies available cash resources when buying bonds it will be necessary to take some concrete cases of bond purchases and record the changes that occur in the balance sheets of commercial banks. It is of course always necessary to start with an individual bank and then show the changes that result in the accounts of banks in general.

For simplicity we may start with a bank that has a capital of \$100,000 and cash of \$100,000. Investments in building and equipment, loans, and so forth may for simplicity be omitted. Increases or decreases of items on the balance sheet will be indicated by the + or - sign, as the case may be. The initial statement is as follows:

Resources		Liabilities	
Cash.....	\$100,000	Capital stock...	\$100,000

Assume now a purchase of \$10,000 in bonds from A. The statement becomes:

Resources		Liabilities	
Cash.....	\$100,000	Capital stock...	\$100,000
Bonds.....	+10,000	Deposits (A)....	+10,000

This requires explanation. First, is it a fair assumption that the cash will remain at \$100,000? Yes, because the seller of the bonds does not usually wish to withdraw cash; he prefers a checking account. Hence the sale of \$10,000 of bonds to the bank results in a deposit account of \$10,000. Assume now, however, that A draws a check against this deposit account in favor of B; assume further that B deposits the account to his credit in this very bank. It is apparent that the \$10,000 of deposits have merely been transferred from the account of A to the account of B and that the totals

are unchanged. Assume now that B writes a check in favor of C, and that instead of depositing this check in this same bank (X) he deposits it in Bank Y. The result of this is that deposits have been reduced by \$10,000 in Bank X but increased by \$10,000 in Bank Y, thus:

BANK X		BANK Y	
Resources	Liabilities	Resources	Liabilities
Cash... \$100,000	Capital stock. \$100,000	Due from Bank X +\$10,000	Deposits...+\$10,000
Bonds... 10,000	Deposits -10,000		

Bank Y has a claim against Bank X for \$10,000. When this claim is met will not the cash in Bank X be reduced by \$10,000? The answer is, only on condition that there are no counterbalancing claims of Bank X against Bank Y. In practice this would be contrary to fact—for Bank Y is also making investments in bonds, and checks are being drawn against the resulting deposit accounts which find their way into Bank A—when they can be used to cancel the claims of Bank B. Of course in practice these counterclaims are the result of a variety of banking operations rather than of bond purchases only, but it is necessary for the sake of clear exposition to isolate for the moment the bond transactions.

Assume now that in time Bank X makes additional bond purchases from E, F, G, etc., amounting to a total of \$1,590,000. The balance sheet becomes:

Resources		Liabilities	
Cash.....	\$100,000	Capital stock...	\$100,000
Bonds.....	10,000	Deposits.....	10,000
Bonds.....	+1,590,000	Deposits (E, F, G, etc.).....	+1,590,000

Again, is it a fair assumption that E, F, G, etc., will not withdraw cash? It is certainly exactly as reasonable an assumption as that *commercial* borrowers will not withdraw cash; and the assumption, moreover, corresponds with the facts; checks are of course used quite as commonly in fixed capital operations as in commercial business. Now, E, F, G, etc., draw checks against their respective

deposit accounts, and the receivers of these checks deposit them either in this Bank X or in Bank Y in the same city, or in Bank Z, etc., in other communities. Somewhere in the banking system deposits remain increased by \$1,590,000 as the result of the bond purchases of Bank X. Similar bond purchases are concurrently being made by commercial banks everywhere, and resulting deposit accounts are being created in commercial banks somewhere—deposit accounts which remain permanently augmented so long as checks remain the prevailing means of making payment.

In the illustrations above we have been assuming *no* withdrawals of specie. This checking system, however, is not universal, and cash payments therefore occasionally have to be made. It is for this reason that a cash reserve has to be maintained, and it is for this reason that, with the present organization of the commercial banking system, \$1,600,000 is as far as a bank can go in the purchase of bonds (or in the making of short-time loans) on the basis of a reserve of \$100,000, as seen in the previous paper.¹ The cash reserve of our banking system as a whole is about 6 per cent.

The analysis which we have been making is obviously precisely like that which has frequently been made in explanation of the creation of deposits through the making of loans. Our analysis is correct in so far as the assumption that the seller of the bonds takes a checking account is correct. Granted that he does not withdraw cash, may he not, however, often ask for a bank draft instead of taking a personal checking account, and would not this put a new face on the problem? Specific accounts will again aid us in ascertaining the actual results. Let us assume a purchase of \$10,000 of bonds and payment by a bank draft:

Resources		Liabilities	
Cash.....	\$100,000	Capital stock...	\$100,000
Bonds.....	+ 10,000		

The balancing item for the bonds, +\$10,000, would be either: Due from banks —\$10,000 on the assets side, or Due to banks +\$10,000 on the liabilities side. That is, the claims of Bank X against its correspondent have been reduced by \$10,000, or the

¹ See *Journal of Political Economy*, XXVI, May, 1918, pp. 497-503.

claims of the correspondent against Bank X have been increased by \$10,000. Assuming that a liability "due to banks" has been increased by \$10,000, let us see if this shortly results in a loss of cash. Will Bank Y present its claim and ask for cash? Certainly not, as a rule, for bankers in relations between themselves are even less likely to require specie payments than business men in their relations with banks. "Cash moves only as a last resort." So long as there are counterclaims arising from similar bond purchases (or from other operations) by the correspondent bank cash payments will not be required.

But what of the seller of the bonds? Does he not cash the bank draft at his own bank? Obviously not, so long as it is more convenient to deposit it and draw checks at pleasure. Suppose the draft is deposited with Bank Y—the correspondent being Bank Z in another city—Bank Y's balance sheet would show:

Resources	Liabilities
Due from banks . . . +\$10,000	Deposits +\$10,000

As in the previous cases the collection of this draft and the payment of the deposit account would involve the use of actual cash only as a last resort.

There is a third way in which the seller of bonds might prefer to be paid, namely, by a cashier's check. This does not, however, change the ultimate situation. Bank X's statement would show:

Resources	Liabilities
Bonds +\$10,000	Cashier's checks outstanding +\$10,000

When the cashier's check is presented to a bank somewhere it will usually not be cashed but will be entered as a deposit account. Again, all along the line cash will be paid only as a last resort. And in the system as a whole sixteen dollars of bonds may be bought for every dollar of cash reserve.¹

I say sixteen of bonds for every one of cash; but this precise ratio is of course unproved. The analysis in the preceding paper

¹ Whether this expansion of credit has any economic results other than to raise the price level must be discussed at another time.

showed this to be the ratio of the total cash to total loans and investments. So long, however, as the sale of bonds to banks results in the creating of checking accounts that are seldom liquidated there is no apparent reason why the phenomenon should not be quite as true with investments as with short-time loans—unless, indeed, it affects the liquidity of bank assets—and hence the amount of reserve required. Discussion of this possibility must, however, be postponed for the moment. The question of liquidity of bank assets in connection with each of the various forms of credit extension will constitute the subject of the next paper in this series.

H. G. MOULTON

UNIVERSITY OF CHICAGO

[*To be continued*]